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In an off-line story-continuation experiment and an on-line self-paced reading experiment, we show that expectations about discourse coherence relations influence the processing of syntactic ambiguity even in the absence of extrasentential discourse. Our results suggest that comprehenders construct discourse contexts dynamically during sentence processing, using available pragmatic cues to generate expectations about the structural analysis of the remainder of the sentence.

Previous work has demonstrated that pronouns in sentences containing so-called implicit causality (IC) verbs (e.g. *detest* in (1)) are preferentially interpreted to refer to a causally-implicated referent (*Bob* in (1); Garvey & Caramazza 1974, McKoon 1993, Koornneef & van Berkum 2006, *inter alia*).

(1) John detests Bob because he…

Specifically, *detest* – an object-biased IC verb – imputes causality primarily to its direct object, which, when combined with the causal connective *because* (indicating an Explanation coherence relation), creates the expectation that the pronoun in the ensuing explanation is more likely to refer to the object than the subject.

This property of object-biased IC verbs allows us to pose a novel question with respect to the processing of relative clauses (RCs). In addition to providing information to restrict the modified noun (as in 2a), RCs can be co-opted to provide explanations as well (as in 2b).

(2) John detests the children $\left\{\begin{array}{l}\text{(a) who live down the street}_{\text{[restriction only]}} \\ \text{(b) who are generally arrogant and rude}_{\text{[restriction + explanation]}}\end{array}\right\}$

It is a well-established result that English has a default low-attachment bias when multiple attachment sites are possible, such that comprehenders would expect the RC in (3) to modify *the musician* rather than *the children* (Cuetos & Mitchell 1988, *inter alia*). However, the aforementioned properties of IC verbs suggest that a high-attachment bias might emerge in cases with an explanation-providing RC following an object-biased IC verb, since the causally-implicated referent is in the high-attachment position.

(3) John $\left\{\begin{array}{l}\textbf{detests}_{\text{IC}} \\ \textbf{babysits}_{\text{NON-IC}}\end{array}\right\}$ the children of the musician who $\left\{\begin{array}{l}\textbf{are}_{\text{HIGH}} \\ \textbf{is}_{\text{LOW}}\end{array}\right\}$ generally arrogant and rude.

(a) (b)

This reasoning only goes through, of course, if comprehenders utilize discourse-coherence-level expectations in determining likely attachment sites for RCs – in this case, an expectation generated by the IC verb for an upcoming explanation.

Story Continuations: 52 participants wrote completions for 21 prompts like the variants in segment (3a). As predicted, in comparison with non-IC verbs, IC verbs yielded (i) significantly more explanation-providing RCs, and (ii) significantly more high-attaching RCs.

Reading Times: 58 participants read 20 sentences like the variants in (3a-b) in a moving-window, self-paced reading study. In each case, an IC or non-IC verb was paired with a low- or high-attaching RC (attachment level was disambiguated by number agreement on the embedded verb). We analyzed reading times on the disambiguating verb and two spillover regions. At the first spillover region (i.e. at *generally* in (3))—crucially before the reader could establish whether or not the RC provided an explanation of the main-clause event—we found a significant interaction between verb type and RC attachment level; high-attaching RCs following IC verbs were read fastest among the four conditions.

These results suggest that comprehenders track expectations about coherence mid-sentence, and that these expectations influence syntactic processing.